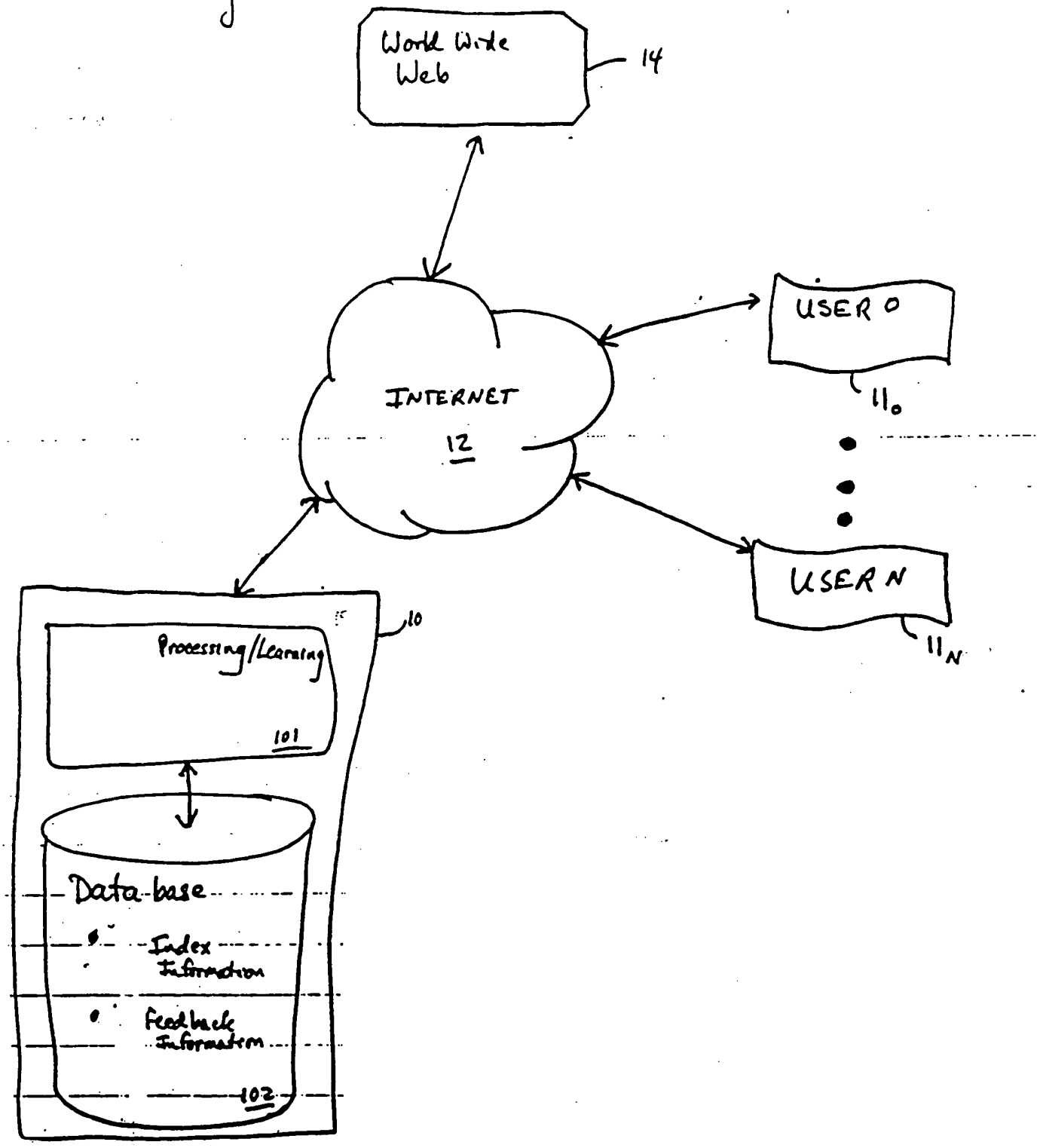
Fig. 1A


World Wide Web
14
INTERNET
12
USER 0
11_0
USER N
11_N
10
Processing/Learning
101
Data-base
Index Information
Feedback Information
102

Multi-user feedback

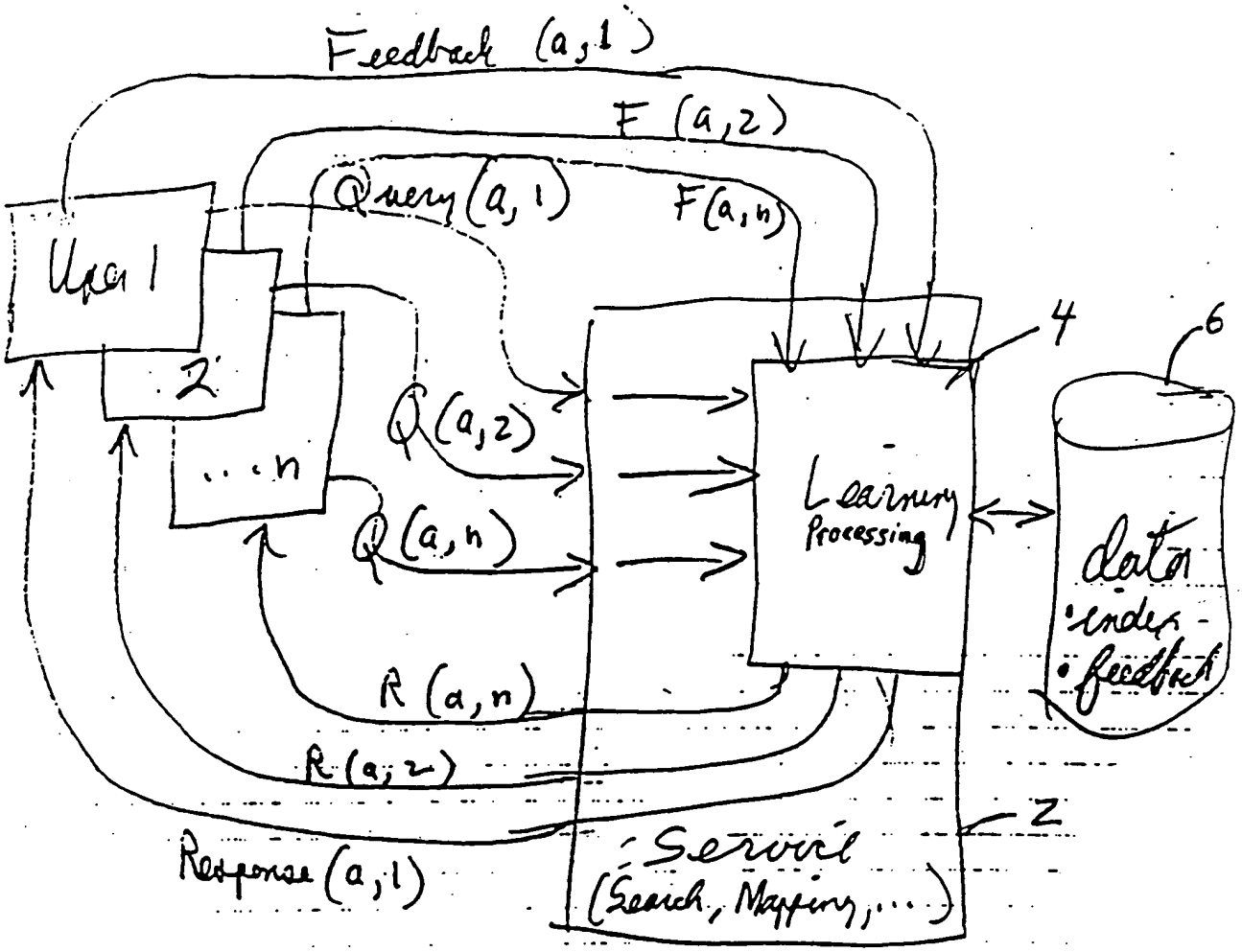


Fig. 1B

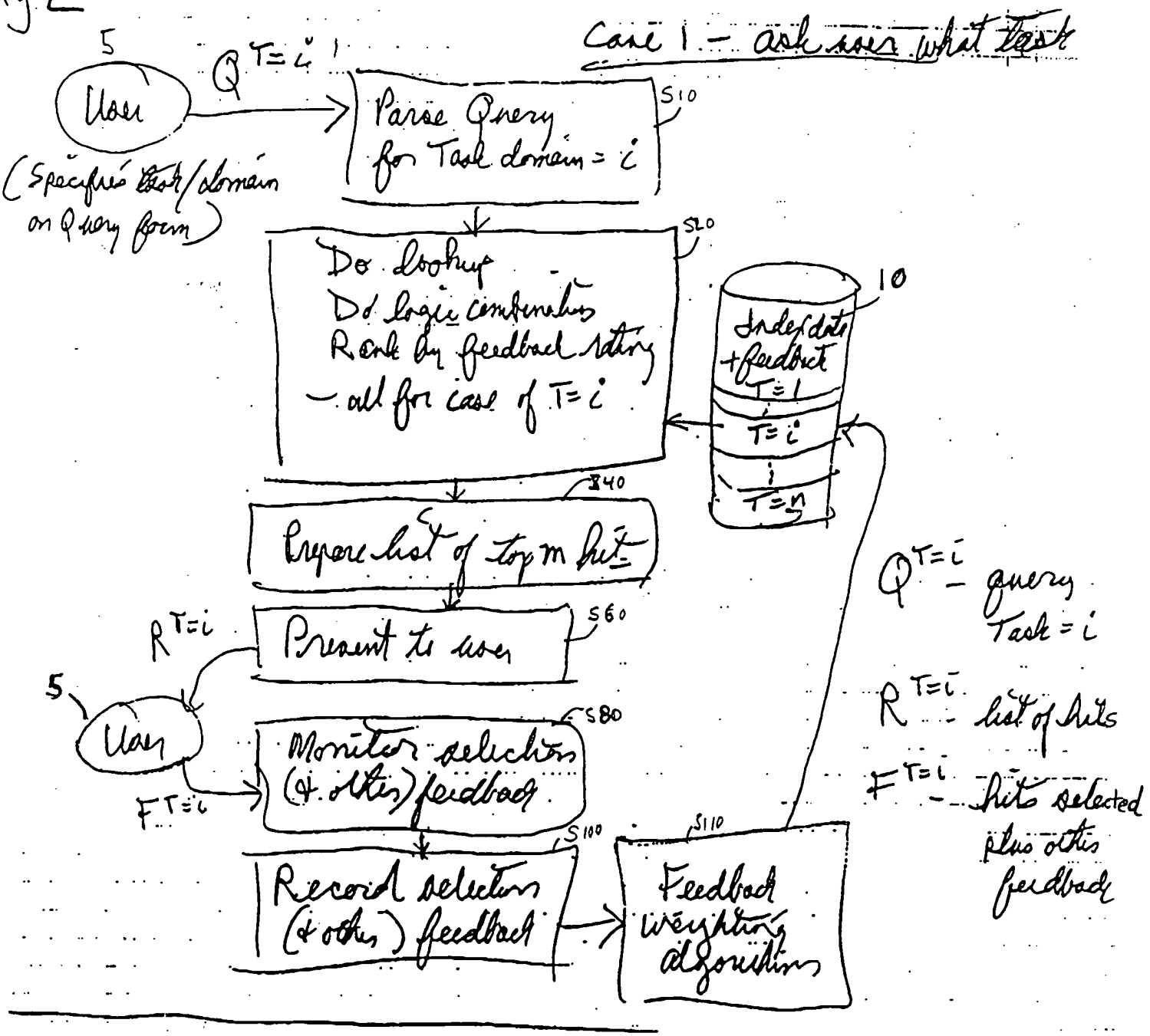
Q
R
F

(a, n)

(Query or request item, user case/instance)

= Query item
= Query response
Feedback results

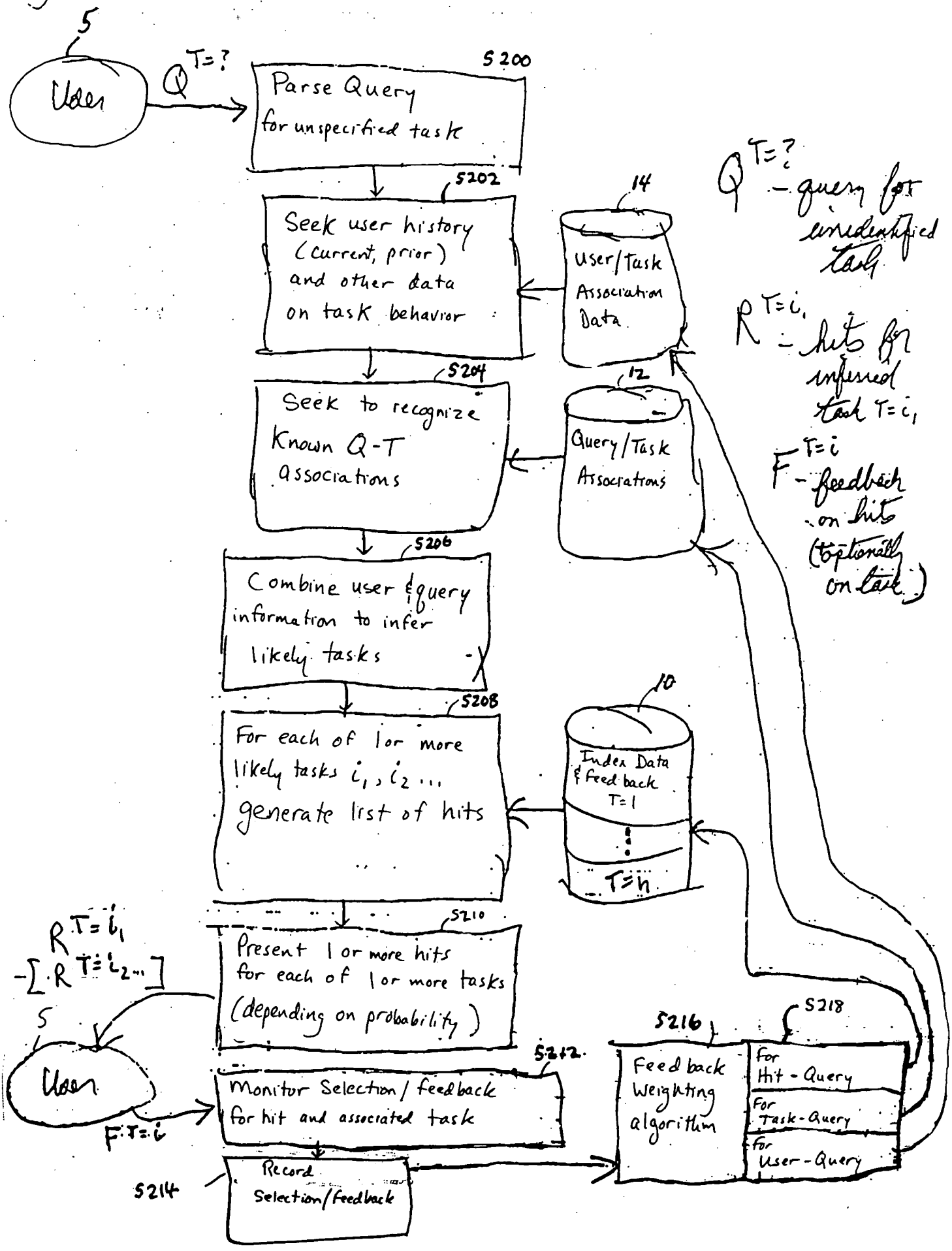
Fig 2



* use semantic info + vocabulary to define tasks
– match task specification in terms of semantics/vocabulary

* segment data by task as feedback is obtained
– start with all data at low probability setting, then adjust as feedback is obtained

Fig. 3


5
User
Q T=?
S200
Parse Query for unspecified task
S202
Seek user history (current, prior) and other data on task behavior
14
User/Task Association Data
S204
Seek to recognize Known Q-T associations
12
Query/Task Associations
S206
Combine user & query information to infer likely tasks
S208
For each of 1 or more likely tasks i1, i2 ... generate list of hits
10
Index Data & Feedback T=1
T=n
S210
Present 1 or more hits for each of 1 or more tasks (depending on probability)
R T=i1
-[.R T=i2...]
5
User
F T=i
S212
Monitor Selection / feedback for hit and associated task
S214
Record Selection/Feedback
S216
Feedback Weighting algorithm
S218
For Hit-Query
For Task-Query
For User-Query
Q T=?i - query for unidentified task
R T=i, - hits for inferred task T=i,
F T=i - feedback on hits (optionally on task)

Index Lamp - Task Domain (Fig 4

Table T=	Q's / Q(a)	Component	Poss Targets	Raw score	Eff. Card	Probability (Card/domain)
	Simple element					
1	Q(a)	0	T1 T2 ⋮	Sa1T1	Ea1T1	Pa1T1
1	Q(b)	0				
	Compound					
1	Q(c)	1				
	Simple					
2	Q(a)	0				
2	Q(d)	0				
	Compound	1				
	Q(e)	1				
⋮						
n						
	simple					
X	Q(a)	0	T1 T2 ⋮	SaxT1	EaxT1	PaxT1
X	Q(f)	0				
X	Compound					
	Q(g)	1				
X_1	Q(a)	0	T1 T2 ⋮	Sax_1T1	Eax_1T1	Pax_1T1
X_1	Q(b)	0				
X_1	Q(c)	1				
X_2	Q(a)	0				

Known tasks

Unknown tasks

FIG. 5 A

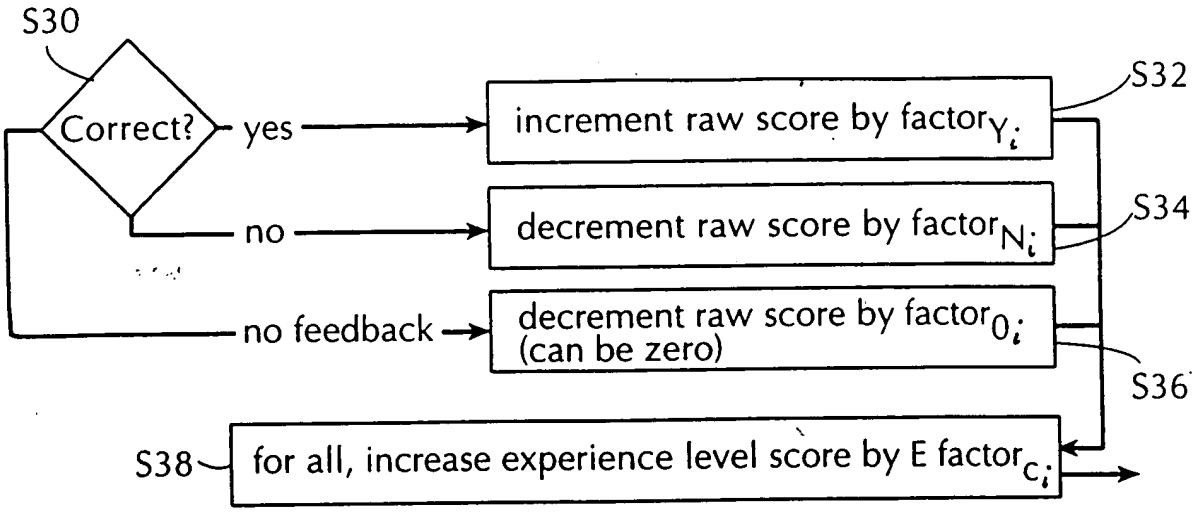
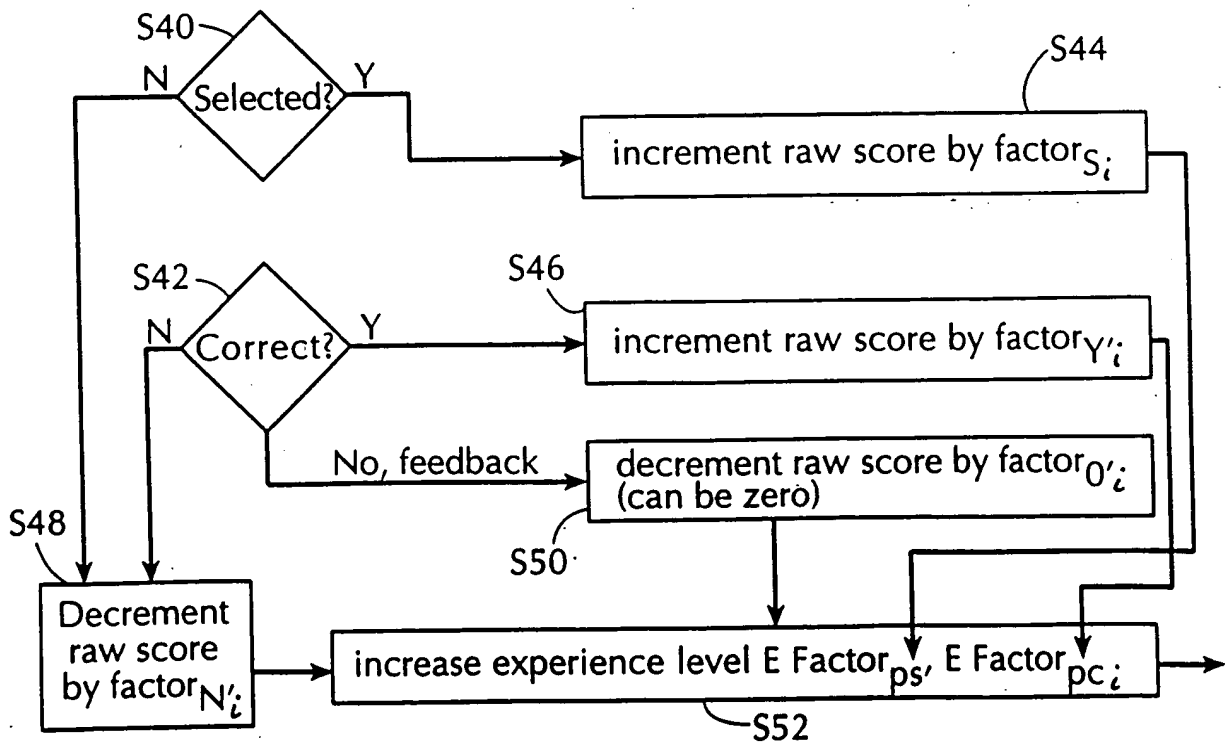

S30
Correct?
yes
no
no feedback
increment raw score by factor$_{Y_i}$
decrement raw score by factor$_{N_i}$
decrement raw score by factor$_{0_i}$ (can be zero)
S32
S34
S36
S38
for all, increase experience level score by E factor$_{c_i}$

FIG. 5 B


S40
N
Selected?
Y
S44
increment raw score by factor$_{S_i}$
S42
N
Correct?
Y
S46
increment raw score by factor$_{Y'_i}$
No, feedback
decrement raw score by factor$_{0'_i}$ (can be zero)
S48
S50
Decrement raw score by factor$_{N'_i}$
increase experience level E Factor$_{ps}$, E Factor$_{pc_i}$
S52